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We have a endency to be a litle more-
Sressive cowarnd dealing with puhlic safeley.-




## In Los Angeles, Rising Ethnic Rivalry

Hispanics and Blacks Perceive Each Other as Competitors


## Try It in U.S. and Risk Gunfire, Soccer Hooligans Told














Seles's Attacker Won't Do Time



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## In Hong Kong Camps, Little Solace for Leftover Refugees

 HoNG KONG - Whinour a map, itis


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1 Would dike to go back." she said "But
1 didn" make a deciong. It is up my
brother to decide." brother todeceide
Thay deceision is not likely to come soon
or easily. Her hrother, a former Viemamese




DOWNHILL ITS EASY - Members of the Iggorot tribe in northwestern Lazon, in the Philippine north, riditing an improvised
wooden bicycle to transport firewood down mountain roads. The Igorots of Kalinga Province are known for their woodroorking.
U.S. and Seoul Give

North a Warning

| SEOUK-South Korea and the |  |
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|  | but is analysis matched the con- |
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| Nations Security Coumcil aftes |  |
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|  | Delonators are known |
| ency. officials sai | among the lisst elernents praiuced |
| and Washington b | weapons. The North says its nucte- |
| med the North through c channels that the is | ar program is purely for peaceful purposes. |
| likely to be referred to the Security | The South Korean report said |
| midil | North Korea was buidding a facility |
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| ean Forcign Ministry official | - |
|  | clear ams. |
| On Tuesday, North Korea's min- | The North's reprocessing facility |
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| eanwhile, the South | The report |
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## Rabin Defends China Arms Sales but Calls Figure 'Nonsense'


Mr. Rabin would hike tio stengenten yhe incentive
 assiss China in is military
provide suc̣ an incontive.
At the sime time, Lstacl nust beware of providing
ractnologies and weppos that someday pould b

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& \text { turned against Isractit targels. } \\
& \text { And where American technology is the foundation } \\
& \text { of an sraeli weapon syslem, the Israci governmentit in }
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## WORLD BRIEFS

Bonn Presses Tainted-Blood Inquiry BONN (Racuess) - The German bealth miniser, Hoss Sely befr.






## Government Battles Khmer Rouge


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shand surate it it


 Lee Kuan Yew Defends China N-Test

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TRAVEL UPDATE
Paris May Spring a Tax on Tourists





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 Che police in Bampkok hare begm a craxdown of dive sex shows Heary niid dencthed santerem Binion Wednosday, Lunning sreers inc flooded Mor rain tell in it haurs sana normally falls in the enirin


## SOMALIA: U.S. Ends Offensive


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Israel and Palestinians Open Talks On Handover and Troop Pullout


## Papandreou to Scrap Privatization



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Sundan.
Mr. Papandremu. 74. a Suxilist

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With MCI CALL USA and MCI WORLD REACH services
reaching around the world has never been easier.


## STATESIDE / A DEFENSE OF POL



President to Seek Cuts Of $\$ 10$ Billion More

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## Away From Politics
















## Clinton Stresses U.S. Security, Domestic and Foreign

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| mostic issus sich as cime control | ale |  |  |
| ing a vible Coreig |  |  | e numerous domestic isures he would pr |

## On Haiti as Well as Somalia, <br> Clinton's Leadership Falters



## U.S. Crises Point Up Initial Failure to Assess Risks in UN










## Gene Manipulators Are Awarded a Nobel HArTI: Eneral Ses Conditions



CHURCH: In Los Angeles, Hispanics and Blacks Increasingly View Each Other as Rivals in Quest for Good Life




## Ateralionateribue

## Now Get Tough With Haiti

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## Breakthrough in Belfast?



## Breaking the Secrecy Habit

| ith Canfare. Attarney cieneral Janel has proclaimed a new, liberalized set of dor or Information Ael. Backed up by dent Bill Clinton, she dolarares thal the ce Deparment will not mutinely defend niri digences than try to <br> he fanfarce is appropriale, even if Ms. is pnxilamatiuns have yet tu be lested in renchss of goveriment. Her new roles dirative to stinnewall Information Act dirative in slinnewal was 'a substantial busis." fror invoking one of the law's aptions froni disklosure. even when the ase whuld nou hurs imyons. <br> the new rules warm grwermment agencies | rily, personal privacy or other incerests cov. ered by the exemptions. <br> The new rules will sperate most effectively |
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## Yes, Angola's Outrageous Spectacle Can Be Stopped

Nold

Somalis Are the Problem and Have to Be Party to the Solution

|  | By Berna | Kouchner |  |  |
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| Haiti's Chief Thugs Will Have to Be Choked Into Submission |  |  |
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Australians Aren't Stampeding Out of the Queen's Big Family


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## LETTERS TO THE EDITOR

Backing the Right Man



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B00KS

| A Real Life Spy Thriller <br> By Victor Sheymov. 420 pages. 524.95. Naval Institure Press. <br> Reviewed by <br> William E. Odom <br> $\mathbf{V}_{\text {spymaster, not the kind of }}^{\text {ICTOR St }}$ <br> KGB officer that used to star in <br> John $k$ Carrics novels. He was a <br> major and a luchnician , ouncornco wiht protecting Sovies commonnica- <br> Lions by codes, cryppographie ma- <br> chines. and an amazing array of <br> gave him a special window into <br> KGB petty squabhles in Moscow <br> as well as into Soriect embassies <br> It also placed him in the most <br> privileged socoial cirictes in Sovier so- <br> ciefty above Soniel law bur subject to the nules of life within tee $K G B$ <br> ditie. As Shesymov tells in, those rules <br> allowed dhe KGB to murder Shey- <br> mov's fellow officer for daring wo tell <br> the Sowiel system. <br> Tower of Scerests" purporst to <br> be a true autobiographica account For the most park, it sems genuine, |
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Uneven Match，but Good Chess
Underdog on Home Turf Leaves Britons Rapt



## EUROPEAN TOPICS

Euxope＇s Women Make Waves Throughout the Military Services Europes miilitries abon began serving for the wastaid Frencb Navy． submarine frigates Latouche－merville and Mon－
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Ex－General

Yeltsin in Japan：The Hosts Are Obliging
By David E．Sanger

Poland Gets Its First Leftist Coalition Since＇89

| Iild bo Our Suff Frum Dipache | teep economic and foreign policy |  | alliance but at a slower pace than |
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| the United |  | which have brought gran | headed by．Hanna Suchaclin． |
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| for prime minister and pledged to |  |  |  |

INTERNATIONAL RECRUITMENT


The Untied Nations Environment Programme（unep）
Invites Applications For The Post Of

CO－ORDINATOR，D－1／D－2 CO－ORDINATION UNIT，MEDITERRANEAN ACTION PLAN
For an Intital Two－Year Fixed Term Appointment
Effective January 1994
The intergoverumental meetings on the Protection of the Mediterranean convened in 1975 to consider an Action Plan for the Mediterranean，reached agreemcnat based on consideration of four main aspects：（a）Integraced planning of the development and management of the Mediterranean Basin：（b） （c）Framework convention and related protocols with their technical annexes for the protection of the Mediterranean environment；and（d） acting as the overall co－ordinator of the activities agreed upon within the framework of the Action Plan．

## zunctions：

Under the general supervision of the Director of Oceans and Coastal Areas Programme Activity Centre（OCA／PAC），and in che general context of
UNEP policy，the incumbent will be responsible for the implementaion of the Brcelons Convention and its Procto Flan（MAP）．Specifically the Co－ordinator will：（1）Follow－up on the implementation of the Barcelona Convention and its Protocols；（2）Co－ordinate MAP programme activities：（3）Administrate the MED CO－Ordinaiion Unit in Athens（workplana Cevisions，staff suppervision and co－ordination， projects implemented by or supervised by，the Mediterranean Co－ordinating Uniti＇（5）Assist Govermments and international organizations to formulate，adopt and implement regional and national programmess for the provection of the Mediterranean sea；（G）Enlist the support of authorities and international institutions towards the achievement of the Mediterranean Action Plan objectives：（7）Make recommendations on further such other tasks as may be assigned to him／her by the Execurive Director，her Deputy，or the Director of OCA／PAC． Oualifications：
Advance University degree in Law，Economics，Marine Sciences or Planning．Extensive knowledge of environmental siwation in the Mediterranean Action Plan．Fluency in English or French with a working knowledge of the other essential．Working knowledge of other United Nations official language（s）and of the region an advantage．

| Salary plus Post Adjustment（Net per anoum），in US Dollars |  |
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－Plus 60 day＇s paid leave every two years；education grant up to $\$ 9,750$ per child per academic year for expatriates．
Deadline for applications： 20 November 1993
All applications be addressed to ：Chief，Recruitment Unit．UNEP，P．O．Box 30552，Nairobi，Kenya，Fax Nos：（2542）217839，（2542） 226890 and （2542）215787．This vacancy may meanwhile be filled by a staff member or by a candidate from the roster．Qualified women candidates are requested to quote vacancy No．NA－93－34 and to attach an up－dared Unaited Nations Personal History form available from nearest UN Office or on request from this office．If UN form is mavailable a detailed curriculum vitae including birth date，nationality and working knowledge of United
Nations Official languages should be submitted．Candidates having a facsimile contact should provide number（s）．
＊Post Adjustment subject to change because of cost of living fluctuarion．



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| Beizona has led the way for 40 years in the development of hideti tecinology systems for the repsir，renovation and reciamation of machinery and equipment． |  |
| Our systems are martered woridwide by independent Disuributors． We need to reinforce our team in France，Germany，Scandinavia and amer areas． |  |
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## HEALTH/SCIENCE

## ${ }_{3}$ Depression and Creativity

An Old Idea Is Gathering New Scientific Support

N
By Naitulia Angier













Mapping Madness and Genius






#### Abstract





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## Epilepsy's Impact on Artistry


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Rate the world's best restaurants with Patricia Wells.

The IHT's restaurant critic has set out carch for the 10 best restaurants in the world. Beginning un Monday with Hong Kong, hi will be rating, in month-to-month articles, his top restaurants from region to region, and Whem to one another.
Whether it's the best in dim sum, elicinch tables she will guide readers with aticles about inexpensive restaurants as well as the grand ones in the world's major cities. She will also share her tips on how to select
quality restaurants in unfamilior territury. Don't miss this scries

COMING OCTOBER 18TH
Hong Kong
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For Valentino, No Tease Needed


## Still trvino to make an international call without Sprint Express?







siprint taxpreses.





HIS MAJOR international conference will take place in Paris on November，9－10．A distin－ guished group of speakers from government，leading orporations and the legal and financial sectors will

For full program details，please contact：
Jane Benney，Intemational Herald Tribunc，
Tel：（44 71） 836 4802．Fax：（44 71） 8360717

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 Grab the Limelight
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## MARK: Currencies Under Pressure

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Travelers Takes Charge for Asbestos HARTFORD, Connectictut (AP) - Travelers Corpe. said Wednesday it ocher environmeutal claims and litigation, and as a revilt expecis a los
for The addioion to reserves will result in an after-lax charge of $\$ 211$
million or 51.44 per common share in the quarer. Withour hee charee
operaing nsuils would have shown an improvement. the company sald. CBS Surges to a Record 3d Quarter


 Venture Capital Lifts First Chicago CHACAGO (Knighl-Ridder) - First Chicago Corp. said Wedoesday
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 Delta Sees Improvement in Results





First Investors Agrees to Settlement



## U.S. FUTURES












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Standards Make Sense of Technological Disorder Successive waves of innovation have revolu-
tionized the way we deal with facts, figures and even faces at a distance. Numerous interna-
tional standard setters tional standard setters have sought to channel
and contain the torrent of technology, bnt few have been asked to do so against such a challenging background as the European Telec
munications Standards Institute (ETSI). munications Standards Institute (ETSI).
Standards exist to harness technology. They dr the line belween generral ideas and precise deffinilíms. Only then ein the technology be channeled,
by way of plugs, protocols and interfaces, ino marby way of plugs. protocols and interfaces, into
ket applications. Al least, thal is the theory.

Internaional standards inevilably concern the
ciccom indusiry - its nciworks nee h 10 form the world's largest and moxic complex single sysicm.
Computer makers are slso involved and nuw ial Computer makers are also involved. and nuw it
number of international bodies. notahly the Internumber of interrational bodies notahly the Intcr-
national Telecommunications Union (ITU), the Innermational Standards Organization (ISO) and the Intermational Electrotechnical Commission (IEC)
are actively engaged with ETSI in the pursuit ol are acuvely engag.
standards for booh. To mark World Standards Day (today, OL, 141 sued a joint message - information management.



 of develnpments is channeled productively hy in-
 extricahly clloser. ETSI's stiled aim is tio prwatue the technieul standards neecesary to achieve a large.

Cominutued en mager its



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TELECOMMU்NICATIONS IN ITALY AND WORLDWIDE


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GREECE
EVERYTHING COMES FROM ITS HISTORY. NOW ITS FUTURE COMES TO YOU.

## (i) intracom

the greek face of technology



## Careful Steps Toward Agreement

When you dial an international call, send a Preparing a draft standard represents a critical mileines to another country, the individual at the other or two, although that time can be cut in the case of urgent ardless of the will receive the call or message reNeither of you will have to make any adjustments to your handsets to compensate for technical differences between them.
Standards make such
Standards make asch communication possible. Without them, phoning abroad would be like trying to run a train
with a four-foot, eight-inch wheel gauge on a five-foot
track.
What
Just about everything involved in the interface betws Just about every
oning involved in the intertace between
and pbone handset need not be stan-
dardized, becuuse it has no effect
on the transmission of the mes-
sage, but the switches that pass the
Public feedback
message from one zone to onother
do require standards. to ensure
message from one zone to another
do require standards. to ensure
technical compatibility between
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callers.
A stand
often suggests better standards
A standard exists as a document
hat contains the technical specit-
for the future projects. The ETSI secretariat based in France, takes the next step: organizing a public inquiry. The idea according to
Mr. Hameloberg, is ${ }^{\text {to make mare that everybody who his }}$ something to say can do so. ${ }^{\text {. }}$
To achieve that. ETSI circulates the draft to every na-
ional standards body. which in turn sends it to ETSI tional standards body, which in turn sends it to ETSI
members and other interested parties. Once comments nembersen and ouper, ine terested paries. Once comments have been recurned, the appropriate technical commithee or corporated into the drati-
cations necessary for the product to which the standard standard is accepted sinions as a whole. In that case, the
within the EC rather than as applies. Obviously, those specifications vary according to a fulll-blown European telecommunication standard.
the nature of the product. They include such factors as lev-
For users of telecommunications, approval of a st the naturuaf the product. They include such factoris as lev-
els of quality, performanc, safety and dimensions. The standard document itself sets out requirements that apply
to the product in terms of terminology, symbols, testing ot the product in terms of terminology, symbols,
and test methods. packaging. marking or labeling.
Setting telecom standards is a complex and etting telecomom standards. is a complex process. o
 nakes morre time. which canty be quite considerable. to get it going. Mr. König is responsible
digital telecommunications networks.
A specificc European telecorommunica, life as a suggestion rransmitted to the Technical Assembly nies. standagr-sestring organizations or anyone involved
with the industry, including users of telecymmuncation with the industry, including users of telecommunications
services. "We very murh encourage users to get in.
volved." says Peter Hamelberg. chairman of the Techni-volved," ssays Peter Hamelberg. chairman of the Techni-
cal Assembly. Once accepted, the suggestion becomes part of a "work
program", allocated to an ETSI technical committee or subcommittee. This group defines the standard's scope and title, delegates experts to produce a dratt standard and
schedules "milestones" on the path to deternining the dard, within the EC or in Europe as a whole. represents
uust the start of the process. "Ins difficult to foree people just the start of the process. ""Il's difficull to force people they are voluntary."
Several difficuylties can arise. Cumpanies may wish to
maintain proprietary technology, for example. rather than opening up to to competition. Procedural problems may apise. Telephone cards are different in different European Neuntries. for instance.
Nevertheless, Mr. Hamelberg says. "ETSI members
have a moral obligaion to use standards." Sometimes. industry groups organize implementation on pamerticulars simn-
dards, although ETSI has no power over them. And the dards, although ETSI has no power over them. And the suppliers of equipunenty can oceraasionally exemert pressure on dards thal they might otherwise ignore.
What ETSI can and does do is to che
What EI w can and does do is to check extensively 10 need feedback,", says Mr. Hannelberg. Sucb feedback-
from suppliers. users and regulators - can oceasionally from suppliers. users and regulators - can occasionally
show that a slandard needs adaptation, alchough that is not common. The feedback often suggests beter methods of standard-
seting for the future. - We re always learning how to do
it"' concludes Mr. setting for the future. "We rer always learming how to do
it." concludes Mr. Hamelberg.
Peter $\mathbf{G}$ wynne

## SEnse From Technological Disorder

| Continued from page 13 | cluding American and Japanese companies. | Meanwhile, the business of making and marketing | they all work together. Thus the digital GSM sys- |
| :---: | :---: | :---: | :---: |
| In other words in addition | what it lacks in adminisma- | ISDN (or integrated ser- | ISDN network in just the |
| to channeling global tech- | tive | vices digital network) is fi- | sam |
| nology, European telecom- | goverrmental. the institute | nally in place. Withour |  |
|  |  |  |  |
| inevitably part of a com- | sus. Its regionality | er | GSM. That is precisely the |
| litical process. | ETSI is not exclusiv | sive redefinitions could | cboice. that European, stan- |
| In the mid-1970s, when it | its broad-based me |  | dards se |
| st about $\$ 50$ million to | ship includes the European | Now, with n common set of | On balance, they work |
| velop a switching syster | industry's administrators, | standards for narrowband | arkably well when |
|  |  |  |  |
| European nations could still | ers and users; its open | the industry may finally re- | webs woven by an average |
| ord to support their own | ders reach as far as the | alize some long-promised | apiculture, insurance or so- |
| indigenous telecom indus- | Urals: its associates |  | cial policy directive. |
| tries. A decade later, the | drawn from as far away | Equally important, by | With revenues running at |
| search and development | Australia. As the EC Com | drawing a line in the sand. | an all-time peak, the indus- |
| sts had soared to upward | mission's recognized | ETSI bas ensured that fu- | try has consistently figured |
| \$500 million while | com standards body. ETSI | ture digital network devel- | among Europe's healthiest |
| product's life expectancy | can be called upon to estab- | opments will all be star | and fastest growing. By the |
| was balved. | lish standard | from the same theoretical |  |
| In 1987, the Eu |  |  | pected to underpin one in |
| Commission's |  |  | did |
| single market presupposed | is one of the EC's first $d$ | irssome, |  |
| for telecommunications the creation of an institute such |  |  | Revenues for the OECD rea, which rose from less |
| as ETSI. Backed by Brus- | EIN | OF STANDA | than $\$ 250$ billion in 198010 |
| sels, and its operators' attendant industries. CEPT | HNICA | 1989 | around $\$ 300$ billion in |
| (European Conference of |  |  | by 1990. Another key |
| Postal and Telecommu |  |  | cator is the amount of |
| cuickly look the initiative | Dratt on Public Enquiry and dcioteraled procastuna |  | cartied, whicb repre- |
| Our objective was the | Draftis on Vole |  |  |
| me as the Green Paper | Pubished standards and tit | chn | European telecommuni- |
| the new Europe." reca |  |  |  |
| ETSI's current directo | $\square$ Standards being mantain |  |  |
| Karl Heinz Rosenbroc |  |  | athed. Now, the whole in- |
| -At that time, nearly every |  |  |  |
|  |  |  |  |
| ment manufacturer and. |  |  | cade when the most com- |
| perition between them, the |  |  |  |
| pearket ${ }^{\text {mas }}$ maseen fragmented. |  |  | le |
| Technically. our objectiv |  |  |  |
| were 10 establish harrm |  |  | obabl |
| nized telecom networks, to |  |  |  |
| enable pan-European inter- |  |  | - |
| connection, and thus ass |  |  |  |
| in the creation of a far larger market.' |  |  | ced either to concentrate |
| crike the political ambi- |  |  | ore intelligence |
| tion that precede |  |  |  |
| has not been an unqualifi |  |  |  |
| success, but its record is | rect requests, for standards | ty, the Global |  |
| errheless commen | covering Open Ne |  |  |
| ciate | Provision. By asking | (GSM) was initialy intend- |  |
| ETSI is no. | part of its political st | dig |  |
| ETSI is not a super-reg | the EC directive was | sh of incompatible | dre line. There is away |
| or like. for example, the | tively turning voluntary |  | customer. the common de- |
| C in the United States | standards into naandatory | One of its original technical | nominator. |
| oL for example, open | requirements. | advantages. the insistence | Services," says Antonio |
| close the airwaves across | "ETSI standards | on a single common band | Castillo. chairman of |
| Ontinent at will. It may | untary: | width that could be | ETST's General Asser |
| still order. but it cannot | explains the current chair- | anywhere across the Conti- | keys to the devel- |
| ue orders. | man of the technical assem- | nent, now tends to be taken | opment of a mass market. |
| Nor is ETSI global. | bly. Peter Hamelberg. "B | for granted. Instead, GSM | That's why standardization |
| en compared to wo | the EC can issue regu | - and its European makers | is so absolutely vital, be- |
| ations such a | tions that, in effect. ma | - are vying for a world | cause producss must be |
| ble, UN-hacked | those standards mandal | market sbare. | ked to the provision of |
| (with 96 | For example, Open Nel- |  |  |
|  |  |  |  |
| antity. But it |  |  |  |
| gs together the EC | ple to connect to public net- | fers no such obstacle. In- | wid. t is the voice of |
| try's key players - in- |  |  |  |

[^1]
## The Encounter Between Economics and Technology

## ＂Standardization is the ests is tempered by an at－mary responsibility for pro－ Girst encounter between economics and technoto－

 gश＂，says Karl－Heinz Rosenbrock，director or he European Telecom－
munications Standards nunicatens
institute The setting of telecom－
munication standards is delicate and essential，，iviven
the importance of telecom－ munications in the world conomy and the rapid
pare of technological
change． chace
change
1988． Therefore，in March
988，the European muniry establishean Com－
ETSI．
charging it with the cre charying it withe the cre
atrion of regional telecom
munications standards tha runications standards tha
can connibute no harrmo
ized economic marke among the EC EC courkries
and Europe as a thole and Europe as a whole．
In five years，ETSI has
grown to an organization of grown to an organization of
33 memers from 77 Eu－
ropean countries pospan countries
possible
30 possible $\mathbf{3 0}$ that belong to
one European Conference
on Post and Teleconmuni－ on Post and
In addition to the 12 ountries of the EC，ETSI member states of the Euro－
pean Free Trade Associa－ pean Free Trade Associa－
tion，a number of octher
states，and－increasingly－ the connties of Censingly and
Eastem Europe．According La Mr Rosenberck．the po
tenial clash berween polit－ tential clash berween polit－

civility．＂He adds hat bolh He EC and EFTA have a pecial membership catego－ $y$ and are represented by
counselors＂to incorporate colincelors to incorporate
coisions will into final de－ Based in Sophia Antipo－ is，near Nice in southem is，near Nice in southem
Tance．ETSI＇s 78 full－time
'Standard are practical rather than abstract ${ }^{\prime}$

employees and more than work to faciliary experts ions infrastrucummunica－ region，assure region，assure the inte
working of furture service
achieve achieve compatibibitity of
erminal equipment create pan－Europent tele－ com networks．
Like many in
$\qquad$ hodies．ETSI consists of ral assembly a full－time secretariat an
assembly．
the lect
The technical assembly
through its 11 lechnical
 ducing and appro nical standards． membership in ETSI： ministrations and nation－ slandards organizations （represenuing 10.27 percent
of total membership）pion of totan membership），pub－
lic network ${ }_{14.21}$ network percent），manufacs urers $(60.4)$ ，manufac－ users（ $(7.55$ percent），and
privale service providers． research bodiee provider
（7．55 percent）．All star dards developed by ETS1
are volunsary（although
arey may larer be incopp are volunnary dalthough
they may larer be incorpo
rated by the EC inno bind－ raued by the EC inio bind－
ing directives or regula－
tions）． ing directives or regula－
tions．
Mandatory slandards
tend to end to fall into one of three
areas：puhlic procurement． open network provemisions，
and terminals．Voluntary and lerminals．Voluntary
standards are produed by
entines and companies that will ssubsequenpanives the re－
sponsible for utilizing or sponsibe for utilizing or
implementing them．giving
them them a vested interest
complying with them． ＂The standards are prac－ tical rather than abstract， xplains Christopher Cor－
benco 0 porate conmunica－
ions office for beans．orficer for ETS．
tions
That＇s what makes cur ap－ ＂Trat＇s what makes sur ap－
proach innovative and flex－
ible
Standards are approved
in the technical pssembly in the tecthnical assembly hirough a weighted voing
systen based on cleciom
enpendites expenditures by country．A
71 percent majority．is
needed tor passage．and needed tor passage．and
there is a proviso that stan－ dands can be approved for
EC countries alone if inter－ ests representing the 12 EC
councies agree while councties agree while oth－
ers do not．The effective－ ness of ETSI＇s consensusus
ner
approach is ils approach is illustrated by
the fact that this has never the fact that this has never
happened．
In 1992 alonc．the orra－ In 1992 alonc．the orga－
nization drafted 167 stan－
dards and +2 interim stan dards and 42 interim stan－
dards，with 15 more ap－ proved and avaiting pubbi－ cation．Another 240 are in
the approval process．They the approval process．They
fall into one of 12 current

project areas：glohal siss－tional body like the imer－ cans or mobik conmmuni－nialional Teleconmmunica－
 neworks．broadband＂To hegin with．we beliect
ISDNs．terminal equip－in worrduide slandurs．
ment．eelecommunications．We herchion take ITLi menL．telecommunications．We thereliore take ITLi rec－
management
nctworks．
 telecommunications．open $\begin{gathered}\text { He grose on to puint oun } \\ \text { network provisions．virfual } \\ \text { than dure in a difference be－}\end{gathered}$ network provisions，virual networks．rudio local area
networks，digital lekvision and corporate networks． The work on global sys－
tems for mobile coumuni rems for mobile coulmuni－
cations is considered to be among ETSI＇s n
cesses 10 date． These systems，allow people to matems calls allow their cars from any point in
Europe．and they are al－ ready in operation in sever－ al countries．The standards have even been adopted by
a number of counuries in a number of countries in These areas are of inter－ est to other intermational standards organizations． and the question sometimes． arises as to why ETSI is
needed when an interna－ tween standards and ree twe en standards and rei
onmedatians sthe ITU
 Also，ior politicial reasens． hers as series of clecum op－ tions．nol specilic enough
or delailcd enough to faci－ or delailcie enough to tacil－
itate cunncrial develop－
ment men．Then，wou ，there are
many areas wher there are many areas where there are
no ITristinderds at all． The Eurype：⿰氵n region has its own telecemn charikerer－
istics．for which specitic standards may we appecopri－ standards nayy we appropri－
ate．－we create standirds
where the Tlu is not where the ITU is not active
and then feed ours back to and then feed ours back to
them so they may evenual－ ly become world stan－
dards．＂Mr．Rosentrock dards．＂Mr．Rosenbrock
says．
Claudia Flisi


Alcatel．Solutions for worldwide communications．

As the world leader in communications systems，we are dediccied to bringing people together

As part of Alcatel Alsthom，we believe that the best solutions stem from a combination of global experience and local understanding．Which
is why our 134,000 employees work in close parmership with our customers in over 110 countries．Through Research ond Development we are continually enhancing the capability and efficiency of communications networks． This indudes such odvanced services as
broadband communications，corporate networks， and the highly intelligent Global System for Mobile communications（GSM）．
And so，together with our customers，we continue to provide communications systems solutions，worldwide．


Number ane worddwide in communicotions systems．

EC Sees a Duty to Help Consumer

Within the past two years, Eu-
ropecs $\mathbf{s}$ clecommunications industry has expericnced wo sifmifician poicy irends that appear tn be con-
iradictry: standardization and
derequintion. deregulavian. Britiain's cimliservative pariy under Marnarry Tlatacher and baken under en-
 pean ceven numents. ainus st sprezul the
 cealchplirase: The ulurese companini Britain ilself is all exallurle of
 have culu prices and improved hutli
uncir lechululeyy aud their serviec in



 , tions. selwurks is the coul.
The prohlent is that the

 au the expense on less enduwed cullu-
 vices a strong advinnuye over smrill
lokall lirut In pracilice. the silturtion is nol as
 derepulation ind standardization call rupezen users it phane. hix and data prices ind heller yuality
be avoided. aresues Peler Hamellere

 tions.
By itsell. huwever. such harrmol-
 :ineme. "We whuld never slandardize


 ance ospliun.
comor
Kur




> Mix and match of equipment is possible

## lelephony are in cumpelition. We nore hampeced siun ination of he haringing hul nand-in-hpiltu with lcechnical hamut  appruach, comnends Mr. Kiinig. will he the users. - We have til hear the issuks as alctess, he nelwurks, for ex-  ment olf cquipment than is essenvial for a traly counpelitive markel. Wilhnint standarars. cinmpanises would tre Clary lecthnology. <br> Thail siluanion happened in the conn- puler wirfl of the 19 orks ind $197(\mathrm{x}$.

Oncr a husiness had houghe a main-
 was elfectively trupped. Since. ihe hle with thase uf sinher vendirsia a firm
luad litle chuice when it waulcd in upgrack its épuipment. The culn pany cuullt cuntinue with
 thing hat it had it culud junk every-
uninh with and start
 puler industry is "upen sysycms.". In and march uquipment lirom differint Thal is th Tinal is the gral of the regulatuts of
 ynu neell tor ricer ra certain standards.
on lecennical interfices. cle..- says Mr. Kininig.
Ln scin
In scluing the sambiards regulaurs
say thal they are aware of he nead tio
 hasse ul' suhteribers. Yor cligital phene
nelworks. for example. "we have in nelworks. for examples we have in
be very clear than were hinking if
tur million pontential husiness suh-
 hr. Kinig pminis oul "Operaturs
hivest:" have an idea of he public inMr Hanctherg insists that eflative
tlanderdizaticon leaves plenty yif scope launk ianization caves plentynf seope ${ }^{\text {lechnieal additians. }}$ -

 incan, thulugh. that the cee-hnology in
vide vidcuphumes whuld he idenical.
There would still he rexill for manulicelurers thu use mire auvanced chips
of fewer chios." "r fewer chipse"
Tu ruvide tomm, says Mr.



People want to communicate


ETBCM MEMBER
...mating the rightit councections.


Necessity Is Mother of Cooperation
The one-time sleepy world of European teleciom- sulted in the development of a number of key techncilu-
munications is waking up. Protected for decades by
sies, such as the broadband incegraled scrvices digital ivi-

 ing to face the cold reality of competition. Some are Fundamental to the new collaborative approach is the
doing so irnnically, by banding closer together.
adoption of common technical standards in ensure that doing so, irmically, by banding closer together.
The single Europcan market is providing a convenient Thic siggic Europc:in market is providing a convenient
it or arl in which to munkye the new collaborntive spirit. Or all the many headlines sannouncing new pan-Epur-
pean alliances in rccent yeass, telecommunications compean alliances in recent yeass, telecommunications comIn terms on the valued or the shared rscources. Ingures ane
heing bindied about in billions of Ecus. But in terms of heing buindied about in billions of Ecus. But in terms of
value to the fiuturc of the European telecommunications industry and the croonnmics of Europe as a whole, the fig. ure is probably incalculable.
It is no cuinciucnce thal the telceom industry is taking sons to do so than most other iodustries
For a starit the ECC Commission has focused a greal deal of its attention on telecommunications. Observers say that ne commision has achieved more in its six years of work
no telenmmunicutions than it has in over 18 years of
work on its agriculural policy, for example. Its main inwork on its agricullural policy, for example. Its main in-
teress lies in Iwur ky arcus: opening up competition on lerest lies in twir kcy arcuss: opening up competition on a
level playing field and cnsuring advanced infirastruclure
provision.
Prote commission has pursued the goal of.ending the
slate protectionism thal helped small national telcom
manuficturers survive the

| . The commission tais pursu state prolectionism thal helpe manufacturers survive the 1970s and the carly ' 80 s. <br> It has alko ssught lo create an advanced commutications infraslructure for the 1990s. To this end it has sponvored a number of resciarch programs aeross the Cnnlinent. It is funding the implementalion of telecommunications infrasiruelure in the less-developed parts nf Europe. <br> EC Comminalinn of these EC Commissiun policies means thal the industry is under increasing pressur io merge, fom joint ventures and take pirt in collaborative researeh. A simple arithmetical cilculatinn makes it clear that there is na room for stragglers in Europe's new iclocmmunicatiuns arder. Indusiry experts csisimate that it cniss sume 1.5 hillion Ecus ( $\$ 1.75$ hillinn) to devel- op a mixdem lelephone exchange. A1 a selling price of just over IIX) Eeus per line, that means that it lakes some 15 million lines in sales just (1) cover the costs of develop- ment. Of course. there are also the costs of producition, murketing and suppon ta be covered. miuking the nationaleovered. muking the national- ly developed ielephone switch - Britain's System X, frr instunce - a ching of the past. <br> This is increasingly the arend with modern telecommunications iechnology. Even the coss of developing a relatively simple mobile telephone handset is extimated at some 15 million Ecus. The culel. Siemens and Eriesson now spend in excess of 10 percent of their revenue on the research and developrnent al their provucts, In winde cases. the ligure is inching elosFil 2 perient. <br> Fraced with such circumstances, the European telecommunjeations industry has pertaps litle oplion but to col- lahorale. This collaboration can take a number of forms. The so-culled precompetitive rescarch programs sponsoned by the Eurupan Community were he lirsi tasite of elnse pan-Eutrpan coilatoration for many telecom com- panics. Prograns such as RACE and ESPRIT have re- <br> the cupuation. that, spells out the of the day, there will be room for only two, or at best thres, major telecomulut: nications suppliers in. Eunnes; with another two in North America and one in Japan. The two most often named as the European survivors are West Germany's Siemens and France's Aleatel. <br> Alcutel can lay claim to being Europe's biggest Lele- communications equipment communications equeraicins throughout the Continent. Its product range covers almost every conceivuble sector al lelecommunicatinns and dala communicatinns and snme relaled data-processing arens. Siemens is part of an 818 hillion (\$27.2 hillion) electrical giann, and its telecommunica- lions divisinn alone can lay claim to heing Europe's sui: ond-largesi telecommunications company. The two companics together supply requirements of France. West Germany and Italy. <br> Perhaps the most interesiing quession is the identity nf in Europe. This, most insilysts agree, will probably te AT\&Tin anc form or anoth- er. Belore 1983, AT\&T wis legally restricted from entering the Europcon markeL By l993, il had succeoded in esuahlishing a presence in most of the major European markets and in acquiring or laking stakes and Britain. There is no sign ol the pattem of ulliances coming of a lel, is expected to be acquined or at leasi purtnered hy one of the hig three in the eoming monilhs. Germany's Buseh (Europe's largest autopants ntanufacturer as well as its entertained a number of diveussions with polential panners for various aspects uf its telccommunicatinns husiness. There is even speculation thal Ericsson may juin maker. Whal everybxody really wants li know, however, is where AT\&T is looking to strike noxi. <br> Peter Partan |
| :---: |

## Standards: A High-Profle Day

It may he a big deal in the wnrld Wrrld Standardis Day hat does
ornader significance? Tony Saunders, markeling director
or the Intenvitional Electrolechnical Cunmissiun, hased in Geneva. he-
 the worth have sture firno of elcthrio-


Geneva will be having a litle pary.
 cinenrices have managed to ciltainn meditia cuveruge of the day itsilf and
the events surruanding it. In several
 coveruge.
part ur thic
usens of finc Piur of the nessage of the day iclls the oller part is the r forende-wetind
 on slandards that users
explains Mr. Satunders.

Virtually every natiunal standards
rganizalicun fealures the day in its
 Suuprisisingly perhaps. Third Wurdd
nations have shown more indersti in
 tricis. ackiording tii Mr. Saundernisur: red国 (

## ADVERTISING SECTION

## When Intellectual Property Rights Clash With Need to Set Standards




#### Abstract

sumer electronics manu-- buile industrial ullopires facturer Amstrad PLC But incir inventions.   lion for the Danish cord- They now tend to worrk lir less and mobile telecom- large indusinal powerhuil less and mobile telecom- munications company industrial powerthusis- Das rall Dancall Radio AB, it $\begin{aligned} & \text { The power or ideas re- } \\ & \text { mentioned the Danish }\end{aligned}$ mains. with companics mentioned the Danish mains. with companicu company's intellectual property rinding increasingly hhal property rights as a major reason for the ac quisition. This is a good illustration of the impor- tance intellectual proper- $\quad$ Money spent ty rights have assumed $\quad$ on R\&D is tween commercial su cess and failure- In mesconce, the icrn tell tellicectual property righs in (IPRS) refers to the iscas thal ind thrs, refers to the incas thal individuals ar organi- zations procect through zalions prolect through cupyrights. paccnts. trademarks. These range from famous logos ang braind names, such as cixa Cola's "Coke. 'to intricall solutions ol levhnical prob lems, such lems, such ws how ul pre- vent microwack sccaping from a microwave oven. Recognition or the power of ideas is nothing new. In of ideasis is nothing new. In the 19 hh century, many inventors, such as ithe Ancr- ican Thomas Alve diver. the German Ollo Benz. the the German Ollo Beny the Italian Guglielmo Marconi und the Scotich merican and the Scotuish-Americian Alexander Graham Bell. | strateg dumin $\underset{\substack{\text { In } p \\ \text { compu }}}{ }$ nicalit ens. su Stales. Ericss devotin gencral produc can be the sm panics |
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## BROADBAND ISDN:

Five years ago, the problem seemed. mation.ai dazzling speed but Asyachronous Transfer
 then that, broad band iservices woukt be.
senit over opptical-ftetr laues. But. wherie was he fiber to ocone from? Narrowband ISDN was adivarcing fast Witith image compression, for example, it conuld support video. phones and evea videcaconfenencing, Eirope's H HOTV
notiative was apparaly
apparenty staling. So where were the
new sery
The probiters, IItinned out was not an


Mation.ain dazzling speed but Asynchronous Transfer briadilaind services could be-detiveted by satellite coas Lal cable pr. over the air, as:wenl as by optical fiber.
In the matter of standards; broadbind eniter greati advantage: ETTSI could avooid the pifyed onc slowed harrowband ISDN by workiag in parallel with
 boith stiared the samieluck breaks. . broadband, and A.AM which was iotended for - 50 of was not strictly Consasticaliy weloomed. is in public network, was er-

S
So did, and large private companies soon followed. vere: keen to blumt the salellite broadcascers's comperatiive edge by matching ihem channel for channel. erage often preceded the standard, broadband ISDN standards swere put to work immediatrly. work inteeconnection and vidcoconferencing have already beenn written and are out for approval. The next
step.is to focus on the even more complex issues of traf. step.is to focus on the even morc complex issues of traf-
fic measumement and control. But, also unlike narrowband ISDN, broadband is rinining comfortably ahead or
schedule.,
S.B.

## DM \$ HKS flr: Zl Fr Crs £ Fmk

DATM METWORKIMG SOLUTIONS

Money Talks.
Northern Telecom Translates.

## 


 Inl|uws sid dothim: annulally.



GLOBAL SYSTEM FOR
Mobile Communcation obile Communication
in started off with a single aim - to go digital. Twelve
years and about 6,000 pages ilater. the standard is finally
being realized. Buta lot else has changed along the way.
$\qquad$ no longer just pan-European. as it oot in Australia Asiorks taking Neither is it it really ifica and Neither is it still limited to the SM was originally lace Europe's tangled wed of inThe reason for this services. - lated to another major lated to another major
change - the transi-
tion from analo tion from analogue to
digital mas set off an-
other shift from mo-

The Global System for bile cellular to what is loosely change-and the GSM standard has
Commnunication
termed the personal communica- cerninly done that
started off with a sintions nerwork (PCN).
Tis move, in tum. generally en tails the use, of a himheren frequaly ency
to support a more densely packed to supporn a more densely packed The trend is especially apparent
in Brituin. which was one of the first to launch PCN-type services standard based on GSM. suitable
The result known as DCS 1800 The resulth known as DCS 1800,
a subset of the GSM standard in the a subset of the GSM standard in the
1.8 GZ band. has been widely used elsewhere.
In the United wave of personal comnunications wave of personal communications
networts are due to be licensed by the FCC. several prospective eappliThe great strength of a good stan
dard 13 its capacity to cerainly done that
But, throughont But, throughont it all. the tech
nology has conformed to essencial nology has conformed to esscncialo offer roughly the same sutt of
iSDN-bike services. Commercial
Commercial services were
launched in Germany and France last summer.
The stand The standard's second phase is
due to be frozen in Ociober 1993 due to be frizen in October 1993 ,
prion to its finalizaion by the ETSI Tecthoical Committee in linanuary
With only the test specilications still uutstanding. the experts arc now turning their attention toward
the future once again. he future once again. European standards for the new European standards for the new The great strength of a good stan-
dard $i 3 i$ its capacity to encompass

After the Telecom Boom, Industry Is Gearing Up for Multimedia Contest

ready for compecition a tor must alko he prepared to
face hallettis clisewhere. face challettges ens lazest set of Tru figures tor fay be less
appears hey may ell preparce's equipmen makess: only Deusche Telekont BT, France Te
com, SIP (from taly Spain's Telctonica Huuny mong the world's top 15
Big may nos necessarily size is playing a key part in
the battle for global busi-
ness.
Corporate services of
every kind- digital voice. image and datas- have be come a majo businessess
multinational
secking to manage their own private. and increaimations neluorks.
Multimcdia may be an plica wo mee curtun bup,
ness mix of videconfer encing data networks and
voice links. The technology voice links. The technolog
is unlikely to evolve unul it
is commentialy is commercially applied to
home cntertionment. But. with cable tclcvision. the first stepp toward this nass market breakthrough hav
already been takc. Meanwhilc, mobile con munications is now th telecom markel's fastest
growing scetor. Industry estimates ol its worth.
whicb were running at and $\$ 4.9$ billion in 1985 have reached nearer $\$ 12$
billion. Subscriber poukential, once discussed in
terms of millions. is now gauged in tens of millions. will turn fül ciricle. Th
gap betwien fixed and nobile networks will be gone plugged by a bybrid of th
tuo.
Telecom and compute technology are converging faster than cever as the cm phasis shifs away fron
plain old telephones towari the pocket-sized mobile
and away from desk-top and away from desk-top
and laptop cerminals to
ward the ward the multipurpose per
sonal digiol The notion of national nerworks with numbered nation
lines rnay finally beco thing of fine lly become by individual subscribe numbers that apply wher
ever a person may be. The most importani step
in this transition. the move from an overly regulated to a mostly deregulated telecom market, is being taken
now. From that. all clsc
may flow. S.B.

## Market Forces Play Key Role in Setting Telecom STANDARDS

Do organizers of telecoms standards work in a
kind of bureaucratic limbo, remota from the workd of manufacturers, users and market demand or do they take notice of the needs of the marke type and quality of telecommnnications services we type and qualty of telecommnnications services w
will all be using for the rest of this century? agree unanimously that market considerations busines agree unanimously that market considerations play a
major role in standard. Suppliers and users of telecoms
equipment are encouraged to suggest new standards and to

New market trends develop rapidly
participate in the process of refining and approving them,
but that is only part of the story.
but that is only part of the stor
"We tave the market into account in a very strong way",
says Euclides Sousa, chairman of ETST's Program Advi-
sory Committee. In fact one of his committees specific sory Committee. In fact one of his committee's specific functions is "improving the effectiveness of the work pro-
gram in line with the real-time markel needs of technical standards."
PAC is a new special committee of ETSI, approved by the organization in Septermber 1992 Mr. Sousa, an exec-
utive with the Portuguese telecommunications network operator TLP, says the committee's mission is to provide guidelines and dadvice to the ETSI Technical Assembly. h hased on market demand and rends, technological evo
Lors.
Users. needs - the ultimate measure of the market play a significant rode in the whole process of standardsening, according to Kurt Konig, who is responsible for tion DG 13. In a way, he argues, the standard-setters can
coms. via electronic mail fersonal computers with tele-
 ty? Smaller users can't afford dedicated solutions. The
only answer is an open solution that ensures end--otend


## Unisource - for freedom of choice

## in telecommunications

Today, international companies have a choice. Technology, liberalization and increasing customer demands have paved the way for a new breed of telecommunications operator, like Unisource. A pan-European, customeroriented company, offering giobal business communications - data communications, messaging services, direct satellite links and outsourcing arrangements. All through one contact and contract.

Unisource is jointly owned by PTT Telecom Netherlands, Sweden's Telia and Swiss Telecom PTT. The parent companies are among the most technically advanced in the world, with excellent services and an extremely high use of telecom services in their domestic markets.
Their national and international services are based on the all-
important work by ETSI,
developing global
telecom standards.



Esc/ut M MEMBER

A Lawyer Looks to the Trends Ahead

Thiomas J. Ramsey, a
partice in the Rrussels
ofice Squire, Sanders ofrice of Squire, Sanders the role of sitandards in the new telecommunica-
tinn environment. This
is all ahridged version of an address delivered at a Gencya symposium. nuni inarket in telecont services has hecumenctuan .l. Driven hy chingeng glxe requiremems. new lect anvy regiuces. prusider and users in ictecomuluni
 Nabilional, revicmial aud in ward nure liferalized tere ation of teleconnmuica ice cyupment and ser such liberalizatition in sonic
 ungulion in more iransanul the sule of eutuipmen mbin connection tow the lull irends, dele Deinnite cialicuns suppliers wilh yleb
 verse coritilization prowe




 general. regimcs are tyene approvinaly regimcs are increasingly
becoming more irans--
parem. In Eurmpe. this has parent. In Eurrpc, this has
resulted in larrec part fmm
the 1986 EC Commissin the 1986 EC Commission
mandate in scparrate regulat tory lype approval functions from nelwork opera-
tion functions. As a result of both nalionaial (e.g. Ausralias, Japan, Kurean) and regional (e.g.)
Communilics)
initiatives. uppliers in many imporbant markels will no longer of having thcir cquipment tested and approved ty nel-
work operalurs who mighi work operalurs who might
view the attachment of such equipment as conirary
10 their own business inter-
ests.
There is elaser cooperation belwwen national. regional and international
standards-scuing organiza-

|  | and dFTA regions. In addition to work nisul Compinitec hasa also obilieceeded tech <br>  |
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tions. In recent years. we ties should not set or accapt
have witnessed growing
standiards in al vacuum but cooperation belween major standards in a vacuum but Europcan standardic-setiting international standards and
bodics such as ETSI, the Europcan Suandards Come promote the open system mitles (CEN) and the Eu- And, therce ant efforts 10
 (CENELECC. Al the inter- ion of equipment agains
nalional level, similar ef- national or regional stan-
fors to cnhance cooperation ha crhance cooperaCCTTT/CCRE, rhe inen by uonal Sanndards Organiza-
tion (ISO) and the Inter tional Electrolecthical Commission (IEC).
Perhaps the worthy event from a type approval perspective was
the escublishment of ETSI This EC-blessed or Ezniza-
tion brings new player 10 tion brings new players to
its standard-selling table.
inctuding suppliers and users. ETST also has a mandala roprowide many of the Eu--
ropean standards that are the underpinning of current
and future EC directives on mutuan recognition of lype
approval. approval. is a srowing Twarenesss of a he impowing tance of intermational stardards hased on the open
systems approach, accomsystems approach, accom-
panied by less intrusive lesting ryimes Thersite is a
growing recognition thal growing recognition thal
national regulanary authori-
 self-examination by nation aj clandurds-selting organi-
zations. zutions. Thomas J. Ramsey


#### Abstract

niuion of test results and formal fype approvals. Self-certification and mutu-


all recognition inditiatives
all
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contine to
will continue to grow in
importance in major mar-
keing countries siruund the
world. This trend should be nationail standards-selting organizutions by promulgating standards that lenc
shemselves.
sireamlining.
such
 Many authorites, includ yrocus. have suuggested nar such trends will continue. In the tir prognosis i
accurate. such trends may provide the basis for mueh eded reform within th commumity. . 11 may als commumity. . It may also

## Teamwork, East and West.

 and CSM in eastern Europe. In Estonia and Latvia, we are also participating in the modernization of thentional tel mim network
East and west. Telia International, together with PTT towardis the establishing of integral pan-European telephony services. Synchronizing the R\&DD resources and service portrolios of three advanced telecom nations, we are setting the standards for a single marketplace with international connections. In tree arens - data networks, satellite and mobile provides toblly integrated global seprator, Unisource NV, For many years, Telin
nies from several coumbries with for their private networks. Today, many telecom operatotors seek similar arrangements to get the best deal with the more than 300 national carriets around the world, and to runmore cost-effective services. Telia is unusually well equipped the benefits of a inique presence in the marketplace.


Telia is the internationul telewminuniuntim!s: company cooned by the Suedish goricmument After 140 years at the fortiront if telerime rownlution, we respond to the new dullinviee of lre and global business enternvise. Towether uelh TTT Telecom Netherlands und Swis PT Teleom, Telin is a co-vosure of Unisnures.


## mela

Your Swedish Telecom Partner


From the heart of Europe... Beigunn is a small country which, over the centurles, has grown belvnd is oun borders. Simated al the crossroasts of Europe, Belgimm his dervelopeda very intemationai aporacch. In addition 10 the potentia . hasmiciure and. last but not least, a spirit of openness an

Listening to the customer..
Whith an mportant teleconn mission to cary out tirst of all we worked very hard land still dol to get to know our custamers' needs, arganizing a refernudun, markernesarch and round-table meetings. Combhning tectmucal quality with a custonle-oriented attitude, nationally as well as internatuonally: tailo-1nade products and services are offered io and ISON are available at highly mpetitive prices. On 1st January 1994, the new European digital and callular mobina tephone system, GSM, will be introduced.

And speaking of value.. by bringing tariffs down.
sure ut the mos/ economent: nopators in the world os mare
 came dawi as ya can see, not onty are we mithe fieariol Europe... we alse get to the theat of the mather. or turther nfformation. pleass 13140039222325 25 ar fax $003: こ 2192975$.




## 'A Crucial Element of EC Policy'

Michael Niebel, cabinet member responsible for the telecommunications industry and services in the not-
telecommunications in the cabinet of Commissioner
Martin Bandistant Martin Bangemann of the Eurinet of Commissioner Community's face of similar changes taking place throughout the in the DG 13, describes the relationship of telecommunica- This role will be progressively reinforced by the exren-
cions standards and the EC.
sion of Conimunity policies to all voice services and to Whons pard does hormonious
the success of the Eurapean Cominumury?
Tentecommunications, comprising manufacture ol provision of networks and cant and growison of networks and services. is a signitian important part of the Comenure economy. As such it is plementation of the intemal market and the commen mercial policy. mercial policy.
Furhermore, telecommunications provides additional benefits to the internal market because of the
of efficient communications in implementing of efficient coninanications in implementing $\quad$ garded as a crucial element of EC telecommunications a wide range of objectives in most other
scclors of the econonyy including
transport eduration healit care en. transport, education, health care, en-
ergy and relations between the member stites.
Trans-European networks, in-
cluding telecommunications cluding telecormmunications. in-
an imporant element in the Massrricht Treaty and in the forthoompeíiveness and employment. Efficient telecommunications requires the application of harmotherefore has a high priority within the European Comitumity's and elecommunications technolo
${ }^{2} \mathrm{E}$ Whun ore the main uims of the Com
numin' surudordi-atiout policy's
They are to facilitat interco They are to facilitate interconimuni-
cation berween the national networks and services in Europe and detresss 10
worldwide exchange of information: worlddide exchange of information
to facilitite e the poriahility of terminals and, mone generally, the opening of the European marke in the field of telecommunicaions: and to strenghen the and suppliers on the wnrid scene.
What role does the $E C$. What rolle does the EC phay in overseeing the devchpIt is widely recognized that during the part decade. Community has cransformed the scene for tradititonal national manufacturers and operators. improving the
prospect of a fully integrated and compeutive market for

operale.
bring these groups togelher? ew or unprecedene telecommunications sector is no new or unprecedented The intermational Telecommuniof cooperation in the pass, and respis is a cootion a ging proceess In addition to the consultative and participative process
organized by the EC. CEPT [Eura organized by the EC. CEPT (Euragzan Conference or
Postal and Telecomnunications Administrations] has organized a degree of wider European cooperation through It is nutional regulatory cryanizations. cooperaulon of players in in the same league, players from
different segmens of
 most. The fact that there is now a timetable and more certainty about the regulatory framework in the Community
will help to foster such conperation. will help to foster such cooperation.
To what extent. if any, are the $n$ Telccomnuunicotions providers preventing them from co uperating in the harnonious development of effective.
spondordized telecommunications that span the Europeon Cocanaaìy?
I think we have made great progress in the last years. The contribution of national telecom operators to this has been very signinicant Many operators have fes in the long run if they stay behind protected walls. Of course, there
ane - as in ane - as in voice telepphony - special circumstances that
require a longer adaptation period. Tecchnology and the


## We set standards

## Research

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We have detivened wond wide over to minion Subscribet Cirds (SIMS) for the Giobal System for


markets might help to speed up development in those
Does stondardiiation reduce the value of competition
in providing telecommunicarions services? No. Standardization increases the opportunites 10 ben-
fit from competition by making it possible for a larger fit from competition by making it possible for a larger
number of suppliers and service providers to compete in number of suppliers and service providers to compete in
the same markes. Furthermore, this does not inhinit in-
Ovation because tetevinumications saidat
 signed or features can be offered over and above the requirements of the standard, permatutng companues to competie on the basis of tecmagy, servce, price and availOn the other hand, equipment and services that are ofindustry standards tend to result in the fragmentation of tercom munication in the longer term. Can the iutellecnall propern. rights of adronced tech-
nology companies be prolected in hhe cnvironnucut of lurmonization? several high-lechnology secios. Ahat the existence or stanBroadly speaking. high-technology companies have a choice: either to retain their proprietary intellectual property rights and compete on the basis of their technology in
 cluded in standards, in which case they are most ilikel
benefit from a much larger market in the longer run.
> 'Efficient felecommunications requires the application of harmonized standards

How does Europe's present telecommunications net-
work compare technically nith those of major rivals. such Work compare tecta?
as North America?
The most advanced European networks compare favorably with the North American networks, but miore generally the European networks are much more heterogeneous
than in North America, which benefits from the heritage of the Bell system and the continuing high level of cooperation, notably through Bellcore.
This is why European telecommunications policies try
to put much more emphasis on hammonization of standards and conditions of access to the nerwork than is the case in North America. It also explains the strong emphasis on
convergence and the corresponding support the Community provides to the devrelopponding of support the CommuWhat advances dogions that need this assistance. What adrances do you see coming in the nert two to
three years in European telecoms? What type of new' ser-

| Integrated SERVICES Digital Network |
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vices cant the business community expect?
There are four points:
There are four points:

- Putting in place the appropriate regulatory framework cations services and equiponinent, to sector of telecommuni- avarantee for
the universality of services and dhe emerenco of Eur the universality of services and the emergence of Eurrop--
wide network operators with "one-stop shopping" for customers. The tiberalization of yoice telephony services is
expected by the January 1,1998 , with additional transiexpected by te January 1 , 1998, with adational transi-
tional periods for some member states. - Providing the whole Community with basic trans-Eu-
ropean telecommunications services as an essential condition for the free circulation of informaition. work providing the four basic services: voice telephony, data services, telex service and simple resale of capacity.
Acceleration of the standardization process and the integration of standards inaon services particularly of those thgat are vital to service interoperability.
Is standardization becoming more or less difficult?

Insofar as telecnmmunications standardization is progressively addressing more and more complex technical
areas such as digial mobile, ISDN s atellite PCN and dig
ital ital broadcasting, it will naturally become technically ization organizations, in enaricular ETSI. have increasing tectmincal complexity. Of deliver results in spite of the the IPR question have to be fours, satisfactory solutions to can participarant in the ensure that small suppliers and uscr ersise thisks being dorninated by those large manufactur in high-technology sectors.
Interview by Peter Gwynn

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## Toronto Beats Chicago, 6-3, To Win Place in World Series



Pat Borders, the Jays'Secret Weapon

##   Worderi, the nusi vaiuable player in the 1992

 very casily could have been outs." DENNIS THE MENACE



To our readers in Gemeily



## Both NL Teams

Have Reasons to
Think Positively















## 





BLONDIE


## CALVIN AND HOBBES <br> 



REX MORGAN


# SPORTS 

## Israelis Shock France, Spain, Italy, Norway Win



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SOCCER.

## Defeat by Dutch Cripples English World Cup Bid

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## ART BUCHWALD

Crime and Profit


The Hollywood-South Africa Reality Gap




## "I wonder if the little guy had fun today









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    3．Excelen verbal and writen communication in English and
    

[^1]:    This advertising section was produced in its entirely by the supplements division of the International Herald Tribune s s advertising department. Steven V. Bartlett is a Paris-based free-lance writer specializing in inforraatio
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